

CLAIMS

This listing of the claims will replace all prior versions and listings of the claims in the application.

1-10. Cancelled

11. (Previously presented) An isolated polynucleotide encoding:

(a) a ribosome-inactivating protein, having a molecular weight of about 26,000 daltons by polyacryl-amide gel electrophoresis under reducing and non-reducing conditions, a pI of about 9.0, and comprising an amino acid sequence at least 75% identical to the amino acid sequence set forth in SEQ ID NO: 9, wherein at least the amino acids that are conserved among type I ribosome-inactivating proteins are of SEQ ID NO: 9; or

(b) a toxin-ligand conjugate comprising the ribosome-inactivating protein of (a).

12. (Previously presented) A recombinant vector comprising the polynucleotide according to claim 11.

13. (Previously presented) The recombinant vector of claim 12, further comprising transcriptional and translational control sequences operably linked to the encoding polynucleotide.

14. (Previously presented) A host cell transfected with the recombinant vector of claim 12.

15. (Currently amended) A method for the recombinant expression of a ribosome-inactivating protein having a molecular weight of about 26,000 daltons by polyacryl-amide gel electrophoresis under reducing and non-reducing conditions, a pI of about 9.0, and comprising an amino acid sequence at least 75% identical to the amino acid

sequence set forth in SEQ ID NO: 9, wherein at least the amino acids that are conserved among type I ribosome-inactivating proteins are of SEQ ID NO: 9 the method comprising

(a) growing host cells comprising an expression vector encoding a ribosome inactivating protein comprising an amino acid sequence at least 75% identical to the amino acid sequence set forth in SEQ ID NO: 9, wherein at least the amino acids that are conserved among type I ribosome-inactivating proteins are of SEQ ID NO: 9;

(e) (b) inducing the host cells to express the ribosome-inactivating protein, and

(d) (c) isolating the expressed recombinant ribosome-inactivating protein.

16. (Previously presented) The method of claim 15, wherein said host cell is a bacterium, a plant cell, or a yeast.

17. (Currently amended) A method for producing a recombinant toxin-ligand conjugate, the method comprising:

(a) growing host cells comprising an expression vector encoding a ribosome inactivating protein comprising an amino acid sequence at least 75% identical to the amino acid sequence set forth in SEQ ID NO: 9, wherein at least the amino acids that are conserved among type I ribosome-inactivating proteins are of SEQ IS NO: 9, operably linked with a nucleotide sequence encoding a ligand,

(e) (b) inducing the host cells to express the recombinant toxin-ligand conjugate, and

(d) (c) isolating the expressed recombinant toxin-ligand conjugate.

18. (Previously presented) The method of claim 17, wherein said host cell is a bacterium, a plant cell, or a yeast.

19. (Currently amended) The method of claim 17, wherein the ligand is, a polypeptide, or a peptide ligand.

20. (Previously presented) The method of claim 19, wherein the ligand is an immunoreactive ligand.

21-26. Cancelled.

27. (Previously presented) The method of claim 17, wherein the ligand is an immunoglobulin, hormone, growth factor, or a peptide.

28-29. Cancelled.

30. (Previously presented) The polynucleotide of claim 11, wherein the encoded ribosome-inactivating protein comprises the amino acid sequence set forth in SEQ ID NO: 9.

31-32. Cancelled.

33. (Currently amended) The method of claim 15, wherein the ribosome-inactivating protein ~~ribosome-activating protein~~ comprises the amino acid sequence set forth in SEQ ID NO. 9.

34-35. Cancelled

36. (Currently amended) The method of claim 17, wherein the ribosome-inactivating protein ~~ribosome-activating protein~~ comprises the amino acid sequence set forth in SEQ ID NO. 9.

37. (Currently amended) An isolated polynucleotide comprising the nucleotide sequence set forth in SEQ ID NO: 8, wherein the polynucleotide is derived from B. spectabilis.

38. (Currently amended) An isolated polynucleotide comprising the nucleotide sequence set forth in SEQ ID NO: 9, wherein the polynucleotide is derived from B. spectabilis.

39. (Previously presented) A recombinant vector comprising the polynucleotide of claim 37.

40. (Previously presented) A recombinant vector comprising the polynucleotide of claim 38.
41. (Previously presented) A host cell transfected with the recombinant vector of claim 39.
42. (Previously presented) A host cell transfected with the recombinant vector of claim 40.
43. (Previously presented) An isolated polynucleotide derived from *B. spectabilis* encoding:
- (a) a ribosome-inactivating protein comprising the amino acid sequence set forth in SEQ ID NO: 9, or
- (b) a toxin-ligand conjugate comprising the ribosome-inactivating protein.
44. (Previously presented) A recombinant vector comprising the polynucleotide of claim 43.
45. (Previously presented) The recombinant vector of claim 44, further comprising transcriptional and translational control sequences operably linked to the encoding polypeptide.
46. (Previously presented) A host cell transfected with the recombinant vector of claim 44.
47. (Currently amended) A method for the recombinant expression of a ribosome-inactivating protein, wherein the protein is derived from *B. spectabilis*, and wherein the protein comprises ~~comprising~~ the amino acid sequence set forth in SEQ ID NO: 9, the method comprising:
- (a) growing host cells comprising an expression vector encoding a ribosome-inactivating protein comprising the amino acid sequence set forth in SEQ ID NO: 9;
- (b) inducing the host cells to express the ribosome-inactivating protein; and

- (c) isolating the expressed recombinant ribosome-inactivating protein.

48. (Currently amended) A method for producing a recombinant toxin-ligand conjugate, the method comprising:

- (a) growing host cells comprising an expression vector encoding a ribosome-inactivating protein, wherein the protein is derived from *B. spectabilis*, and wherein the protein comprises ~~comprising~~ the amino acid sequence set forth in SEQ ID NO: 9 operably linked with a nucleotide sequence encoding a ligand;
- (b) inducing the host cells to express the recombinant toxin-ligand conjugate; and
- (c) isolating the expressed recombinant toxin-ligand conjugate.